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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/819,304

03/28/2001

John Patrick McIntyre JR.

6208-018

4056

27383 7590 12/19/2005

CLIFFORD CHANCE US LLP  
31 WEST 52ND STREET  
NEW YORK, NY 10019-6131



EXAMINER
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ALPERT, JAMES M

ART UNIT	PAPER NUMBER
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3624

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**RECEIVED  
OIPE/IAP**

DEC 22 2005

**Office Action Summary**

Application No.

09/819,304

Applicant(s)

MCINTYRE ET AL.

Examiner

James Alpert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 3/28/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/4/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

The application, received on March 28, 2001, has been examined, and Claims 1-40 are pending. The objections and rejections are as stated below.

#### ***Claim Objections***

Claim 13 is objected to on the grounds that the equation presented therein fails to particularly define each of the symbols used in the claim. As this really a matter of formality, an objection, rather than 112 rejection is presented, yet appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Michaud et al, U.S. Patent #6003018, in view of Rickets et al, U.S. Patent Application Publication #20050137963.

**With regard to Claims 1,21**, Michaud teaches the method and program code comprising:

- a) assigning a covariance matrix composed of a variance for each of said instruments and a correlation matrix to said universe; (Col. 5, line 37 – Col. 6, line 16)
- b) removing one of said instruments from said universe; (Col. 3, lines 36-58)
- c) calculating a residual variance for each of said instruments remaining in said universe; (Col. 1, line 65 – Col. 2, line 8)

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- d) calculating a residual variance for said universe based on said residual variance for each of said instruments and said correlation matrix; (Col. 1, line 65 – Col. 2, line 8)
- e) reinstating said instrument into said universe; (Col. 5, lines 8-36)
- f) repeating steps b-e for each instrument in the universe; (Col. 5, lines 8-36)
- g) inserting into said index said one of said instruments for which said residual variance of said universe is minimized; (Col. 5, line 37 – Col. 6, line 16)
- h) eliminating from said universe said one of said instruments for which said residual variance of said universe is minimized; and (Col. 5, line 37 – Col. 6, line 16)
- i) repeating steps b-h until said index is formed. (Col. 5, line 37 – Col. 6, line 16)

Michaud statistical analysis is based on selecting instruments in order to achieve a portfolio reflective of an overall market. Although the principles are similar to those of the applicant, it is clear that Michaud fails to teach an index per se. However, the of selecting a representative index is old and well known, and is demonstrated by Rickets at (Page 1, Para. 7) which discusses using statistical analysis of stocks, individually and collectively, to form a subset index. As such, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to combine the teachings of Michaud, related to selection of a portfolio of instruments based on residual variance, with the teachings of Rickets, related to constructing a market index from statistical information. The motivation for such a combination is to give a macro-view of market movement to an individual to achieve micro-level investing. In this way, investors can make better informed decisions, leading to increased use in the system.

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**With regard to Claims 2,22,** Michaud teaches the method and program code comprising:

calculating a variance for each of said instruments in said universe; and assigning a correlation value between a plurality of pairs of said instruments in said universe. (Col. 1, lines 34-40)

**With regard to Claims 3,23,** Michaud teaches the method and program code wherein:

some of said instruments in said universe are associated with an entity and wherein the step of assigning a correlation value further comprises the step of: assigning a correlation value between each of said some of said instruments associated with said entity. (Col. 5, line 37 – Col. 6, line 16)

**With regard to Claims 4,24,** Michaud teaches the method and program code wherein:

said correlation value between each of said some of said instruments associated with said entity is identical. (Col. 5, line 37 – Col. 6, line 16)

**With regard to Claims 5,25,** Michaud does not expressly teach the method and program code wherein:

Some of said instruments in said universe are within a sector in a country and wherein the step of assigning a correlation value further comprises the step of:

assigning a correlation value between each of said some of said instruments within said sector in said country.

However, Ricketts teaches these limitations at (Para. 80, Para. 123). It would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to combine the teachings of Michaud, related to selection of a portfolio of instruments based on residual variance, with the teachings of Ricketts, related to assigning a correlation value between each of said some of said instruments within said

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sector in said country. The motivation for such a combination is to give a macro-view of market movement to an individual to achieve micro-level investing. In this way, the investors can make better informed decisions, leading to increased use in the system.

**With regard to Claims 6,26,** Michaud does not expressly teach the method and program code wherein:

said correlation value between each of said some of said instruments within said sector in said country is identical.

However, Ricketts teaches this limitation at (Para. 80, Para. 123). The references can be combined under the same motivation as with claims 5,25.

**With regard to Claims 7-8, 27-28** Michaud does not expressly teach the method and program code wherein:

some of said instruments in said universe are within a first sector and some of said instruments in said universe are within a second sector and wherein the step of assigning a correlation value further comprises the step of:

assigning a correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector; and

said correlation value between each of said some of said instruments within said first sector and each of said some of said instruments within said second sector is identical.

However, Ricketts teaches these limitations at (Para. 80, Para. 123). The references can be combined under the same motivation as with claims 5,25.

**With regard to Claims 9-12,29-32,** Michaud does not expressly teach the method and program code wherein instruments are associated with various companies, sectors, and countries in any combination. However, as discussed above, Ricketts teaches adjusting the index according to these very factors at (Para. 80, Para. 123). Also as discussed above, the motivation to combine the references exists in that a

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macro-view of market movement is available to an individual to achieve micro-level investing.

**With regard to Claims 13,33**, Michaud does not expressly teach the method and program code reflected in the equation presented in this claim. However it would be an obvious modification to the statistical analysis presented in Michaud to further calculate the residual variance as described in the equation. The motivation for modifying Michaud is simply to achieve the most statistically complete indexing as possible.

**With regard to Claims 14,34**, Michaud teaches the method and program code wherein:

said index is formed when a predetermined number of instruments in the universe are inserted into said index. (Col. 5, line 37 – Col. 6, line 16)

**With regard to Claims 15,35**, Michaud teaches the method and program code wherein:

said index is formed when a predetermined percentage of said instruments in the universe are inserted into said index. (Col. 5, line 37 – Col. 6, line 16)

**With regard to Claims 16,36**, Michaud teaches the method and program code wherein:

said predetermined percentage is a percentage of said universe of N instruments on a weighted basis. (Col. 5, line 37 – Col. 6, line 16)

**With regard to Claims 17,37**, the examiner is treating the dv01 value to simply be a the expected correlation value, and as such Michaud teaches the method and program code comprising:

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calculating an original dv01 of said universe before the removing one of said instruments, wherein residual variance is minimized includes, and calculating a remaining dv01 of said universe wherein said index is formed when said remaining dv01 of said universe is a predetermined percentage of said original dv01 of said universe. (Col. 5, line 37 – Col. 6, line 16)

**With regard to Claims 18-20 and 38-40**, Michaud does not expressly teach the method and program code wherein said instruments are fixed income instruments, equities, or FX securities.

However, these instruments are old and well known in the finance arts, and as such the examiner takes official notice that an index would be comprised of these instruments. Further, it would have been obvious to one of ordinary skill in the art to modify Michaud to include specific instruments in the indexing. The motivation for such a modification is simply to include the major instruments in order to ensure investors that the indexing is thorough and complete.

### ***Conclusion***

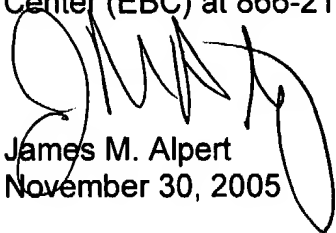
THIS ACTION IS NON-FINAL. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Alpert whose telephone number is (571) 272-6738. The examiner can normally be reached on M-F 9:30-6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on (571) 272-6747. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published



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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.



James M. Alpert  
November 30, 2005

VINCENT MILLIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600





FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office <b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)	Serial No. 09/819,304
	Inventors: McIntyre Jr. et al.
	Docket No. 6208-018

**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	5,774,880	6/30/98	Ginsberg	705	36	2/28/95
	5,857,176	1/5/99	Ginsberg	705	36	5/9/97
	2002/0019789	2/14/02	Ginsberg	705	36	1/4/99
	2002/0007329	1/17/02	Alcaly et al.	705	35	5/9/01

**FOREIGN PATENT DOCUMENTS**

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION
	WO 01/37168	11/2/00	PCT	Yes - Abstract

**OTHER DOCUMENTS**

EXAMINER INITIAL	AUTHOR, TITLE, DATE, PERTINENT PAGES, ET C.
	Int'l Search Report for PCT/US02/09061

EXAMINER	DATE CONSIDERED 11/28/05
EXAMINER: Initial if citation considered, whether or not citation is in conformance with M.P.E.P. 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Form PTO-1449 [6-4]

<b>Notice of References Cited</b>	Application/Control No. 09/819,304	Applicant(s)/Patent Under Reexamination MCINTYRE ET AL.	
	Examiner James Alpert	Art Unit 3624	Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,003,018	12-1999	Michaud et al.	705/36R
*	B	US-2005/0137963	06-2005	Ricketts et al.	705/037
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Organization **TC 3600**

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